

# INDOT Statewide Access Management Study

2004 Regional Planning Conference

October 13, 2004

*Presented by*

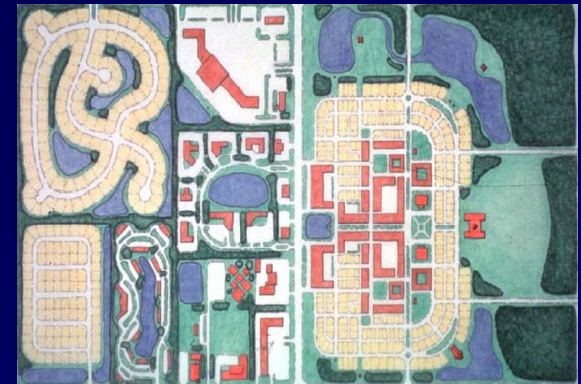
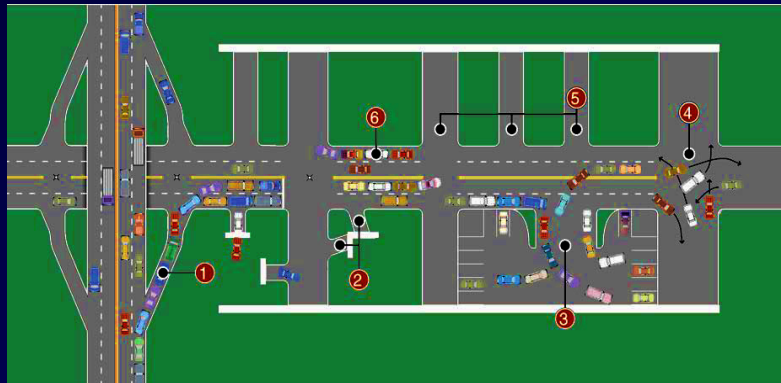
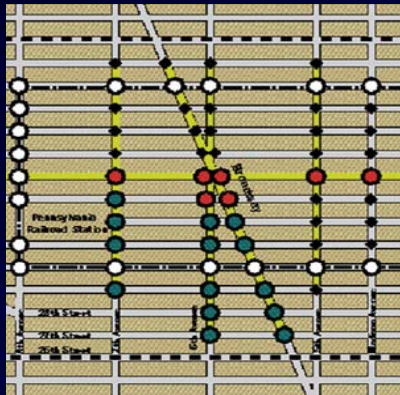
Jerome Gluck, PE, PTOE

Urbitran Associates, Inc.

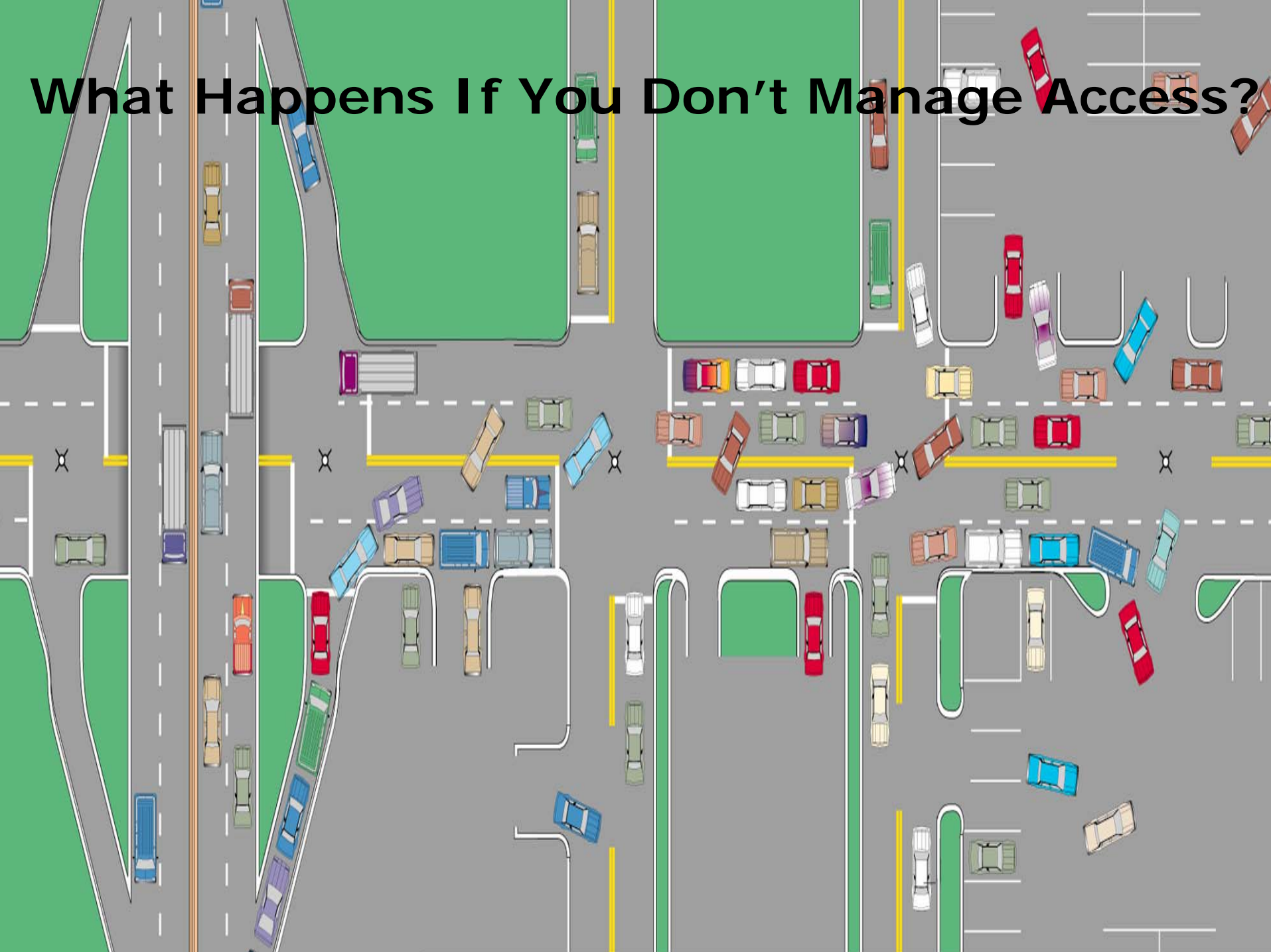


# Presentation Overview

- Overview of Access Management
- INDOT Statewide Access Management Study



# What Happens If You Don't Manage Access?



# What is Access Management?



The Control and Regulation  
of the Spacing and Design of:



DRIVEWAYS



MEDIANS



MEDIAN OPENINGS



TRAFFIC SIGNALS



FREEWAY INTERCHANGES

# Benefits of Access Management

## OPERATIONAL

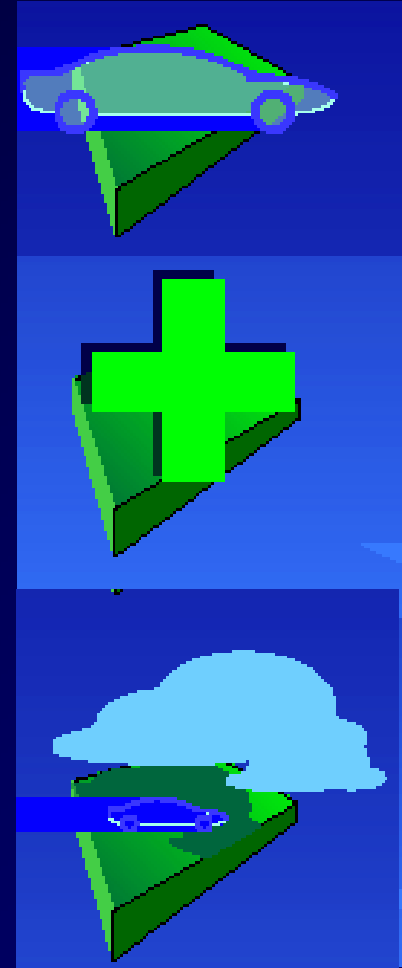
- Reduced delay
- Increased capacity

## SAFETY

- Fewer/Less Severe Accidents

## ENVIRONMENTAL

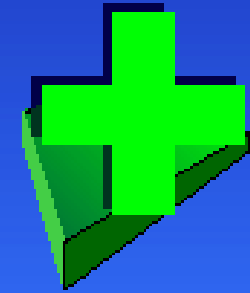
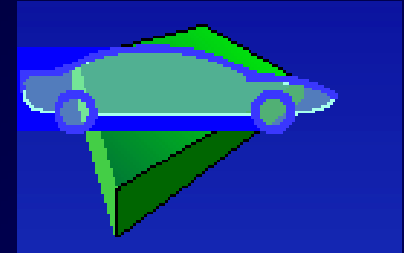
- Improved Fuel Economy
- Reduced Emissions



# Benefits of Access Management

## OPERATIONAL

- Reduced delay
- Increased capacity



## SAFETY

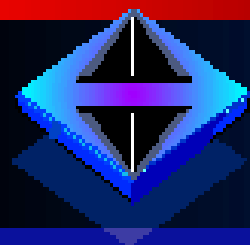
- Fewer/Less Severe Accidents



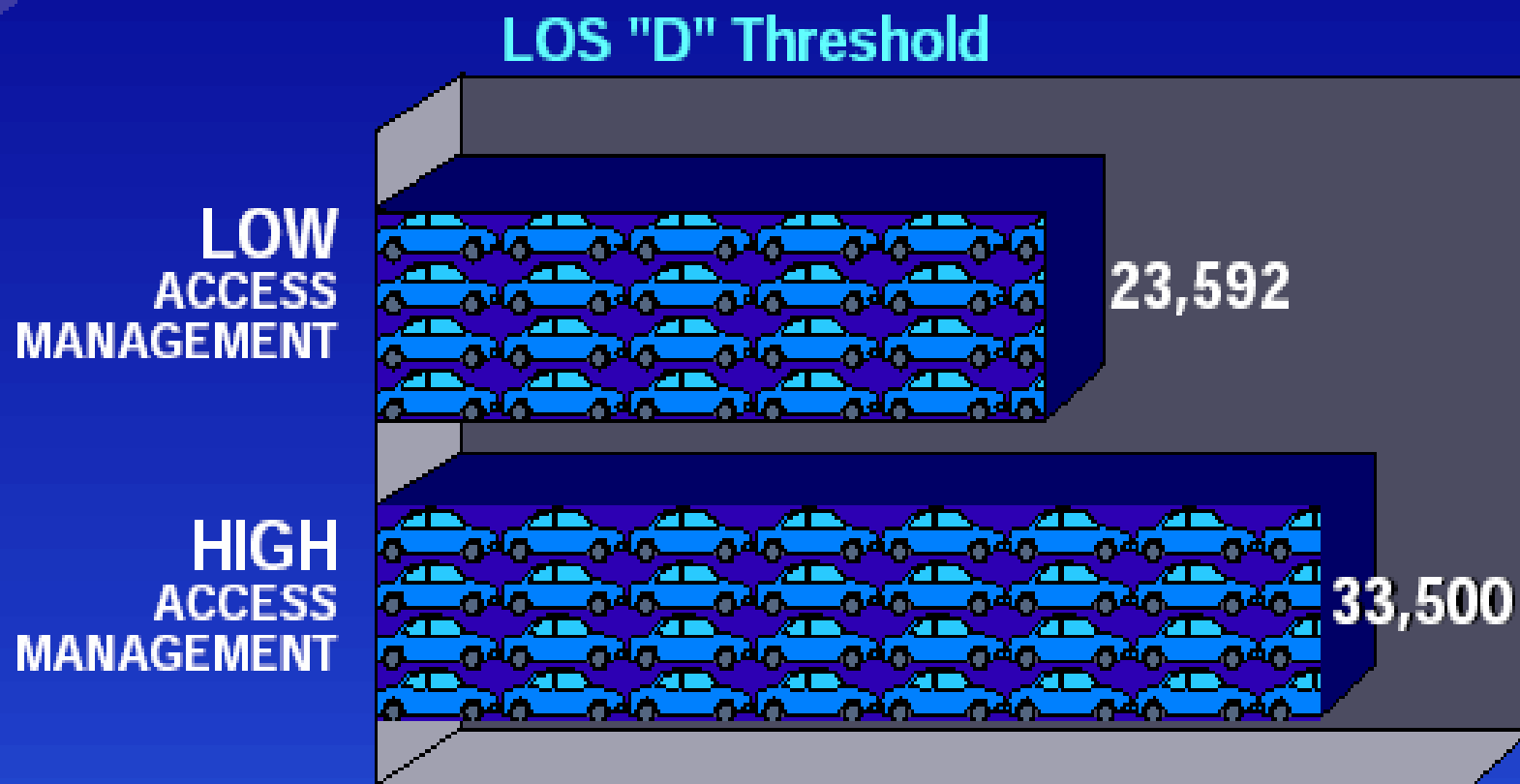
## ENVIRONMENTAL

- Improved Fuel Economy
- Reduced Emissions





# Level of Service Benefits



Maximum Daily Traffic at  
Level of Service "D" on 4-Lane Road

\* Source: FDOT and 1985 Highway Capacity Manual

# Benefits of Access Management

## OPERATIONAL

- Reduced delay
- Increased capacity

## SAFETY

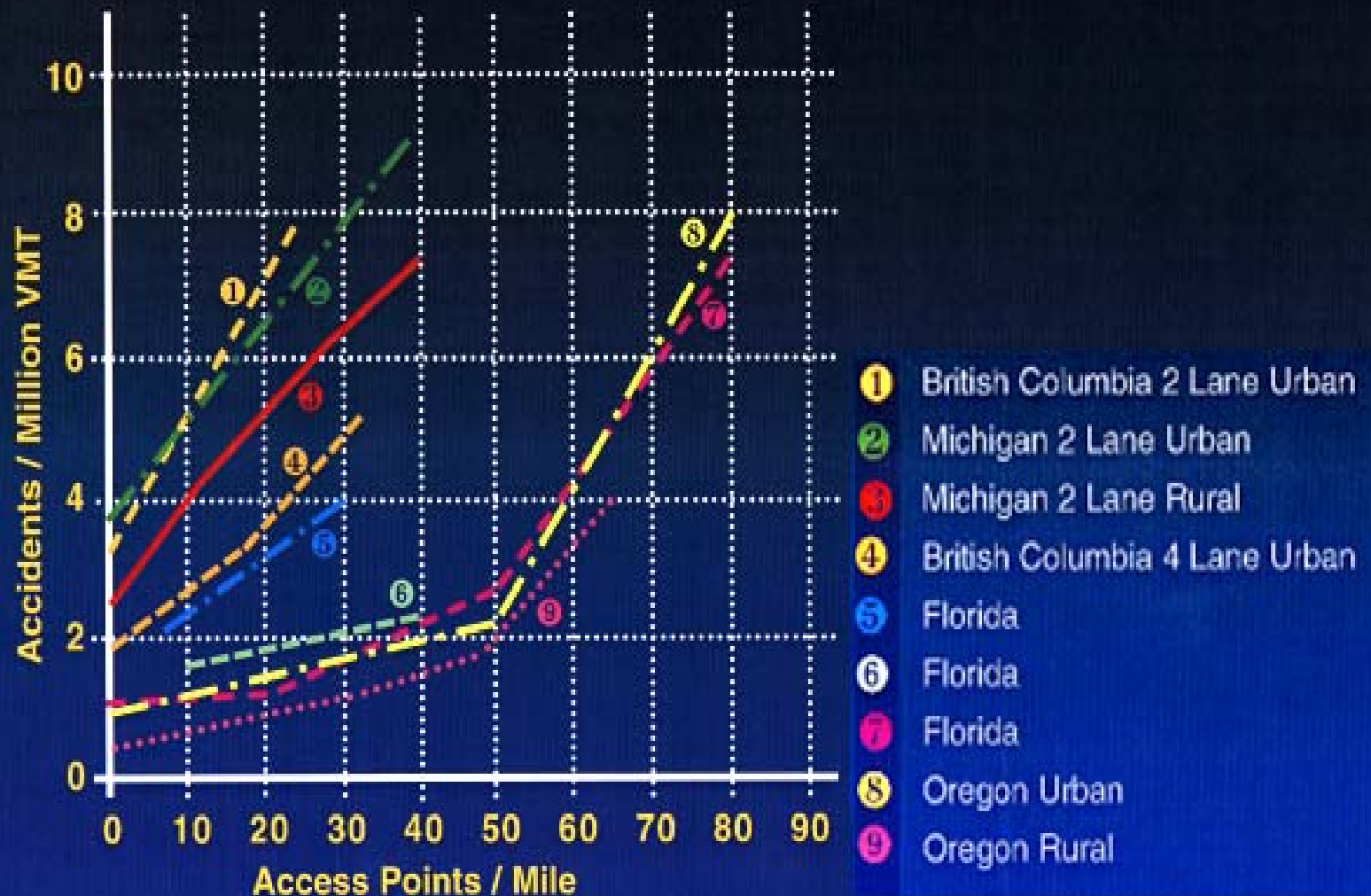
- Fewer/Less Severe Accidents

## ENVIRONMENTAL

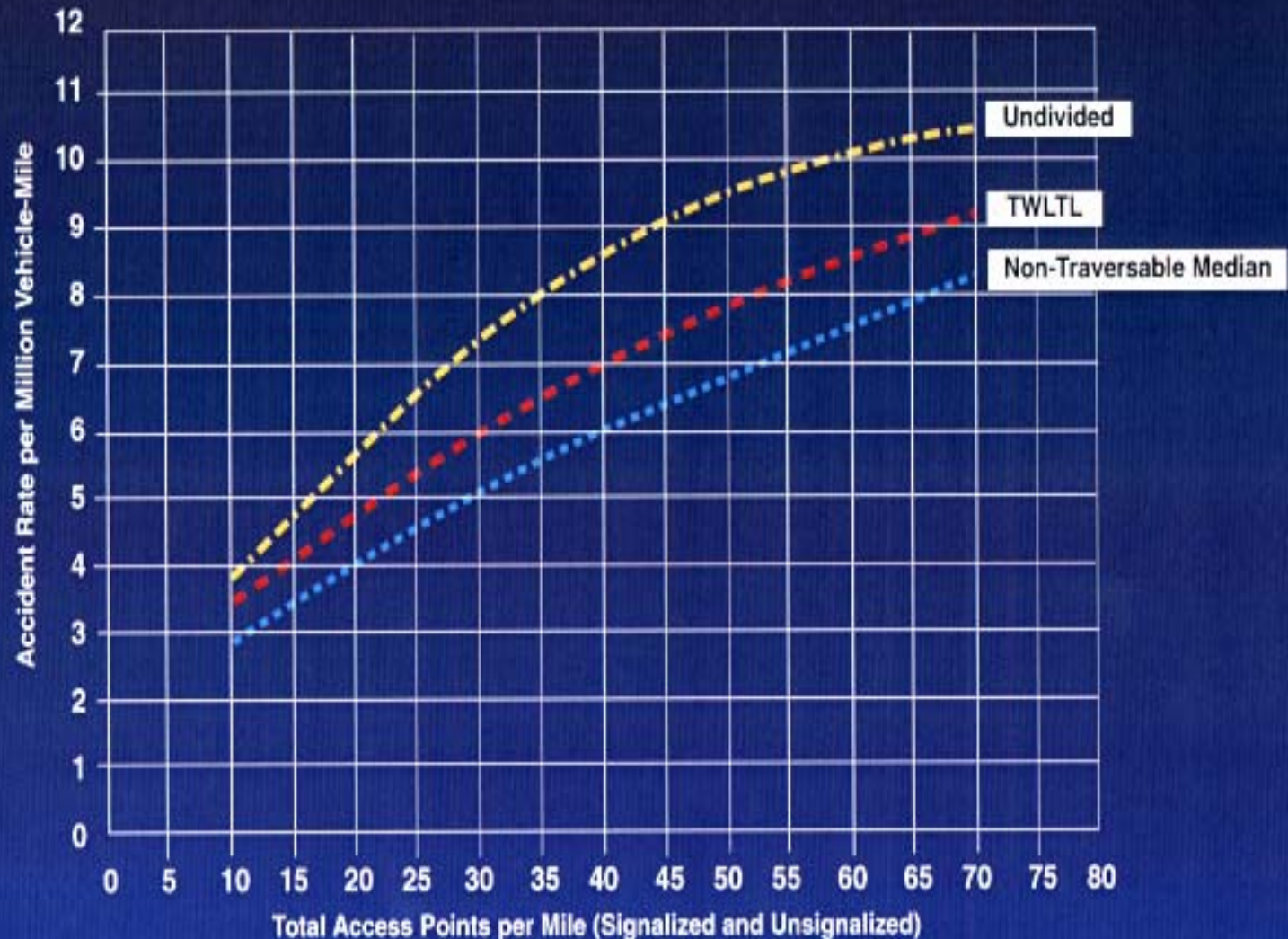
- Improved Fuel Economy
- Reduced Emissions



# Effect of Access Spacing on Accident Rates (Composite)



# Estimated Accident Rates by Type of Median; Urban and Suburban Areas



# Benefits of Access Management

## OPERATIONAL

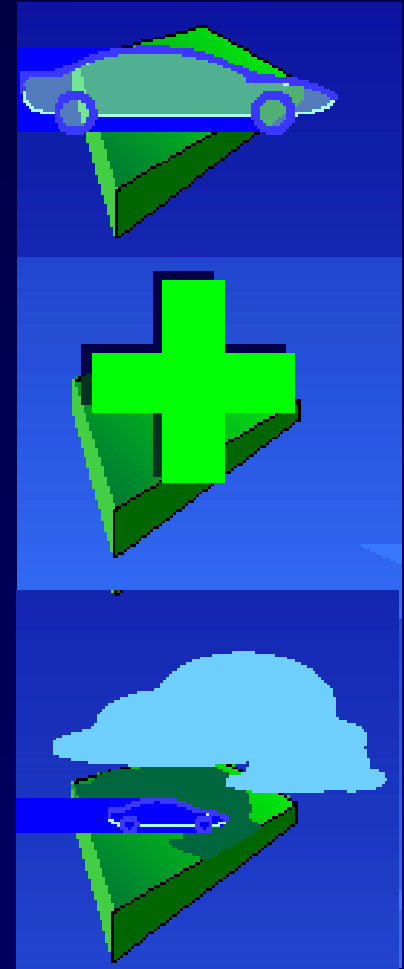
- Reduced delay
- Increased capacity

## SAFETY

- Fewer/Less Severe Accidents

## ENVIRONMENTAL

- Improved Fuel Economy
- Reduced Emissions



# What are the Principles of Access Management?

- Limit the number of conflict points
- Separate the conflict points
- Remove turning vehicles and queues from through movements



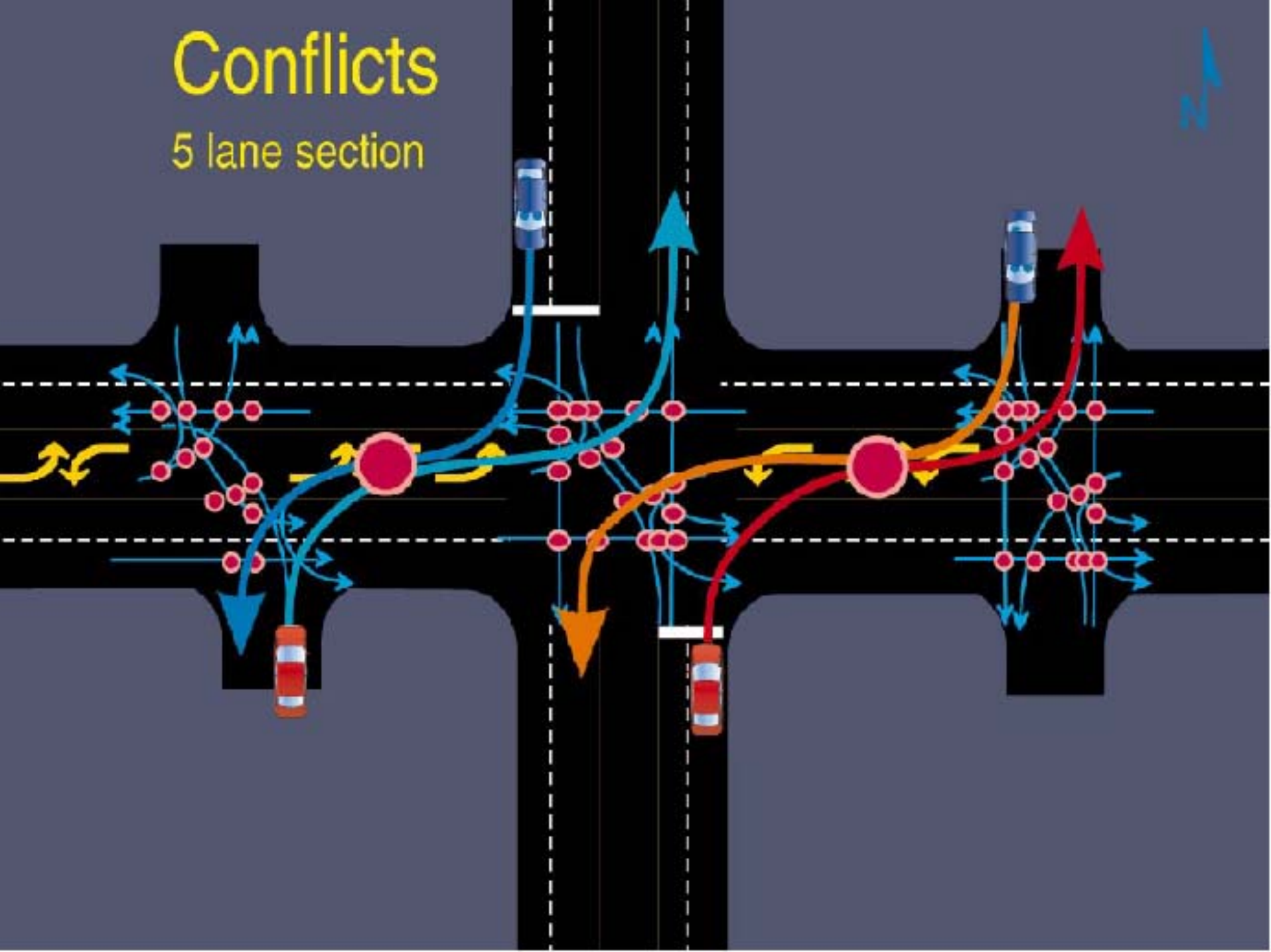
# What are the Principles of Access Management?

- Limit the number of conflict points
- Separate the conflict points
- Remove turning vehicles and queues from through movements



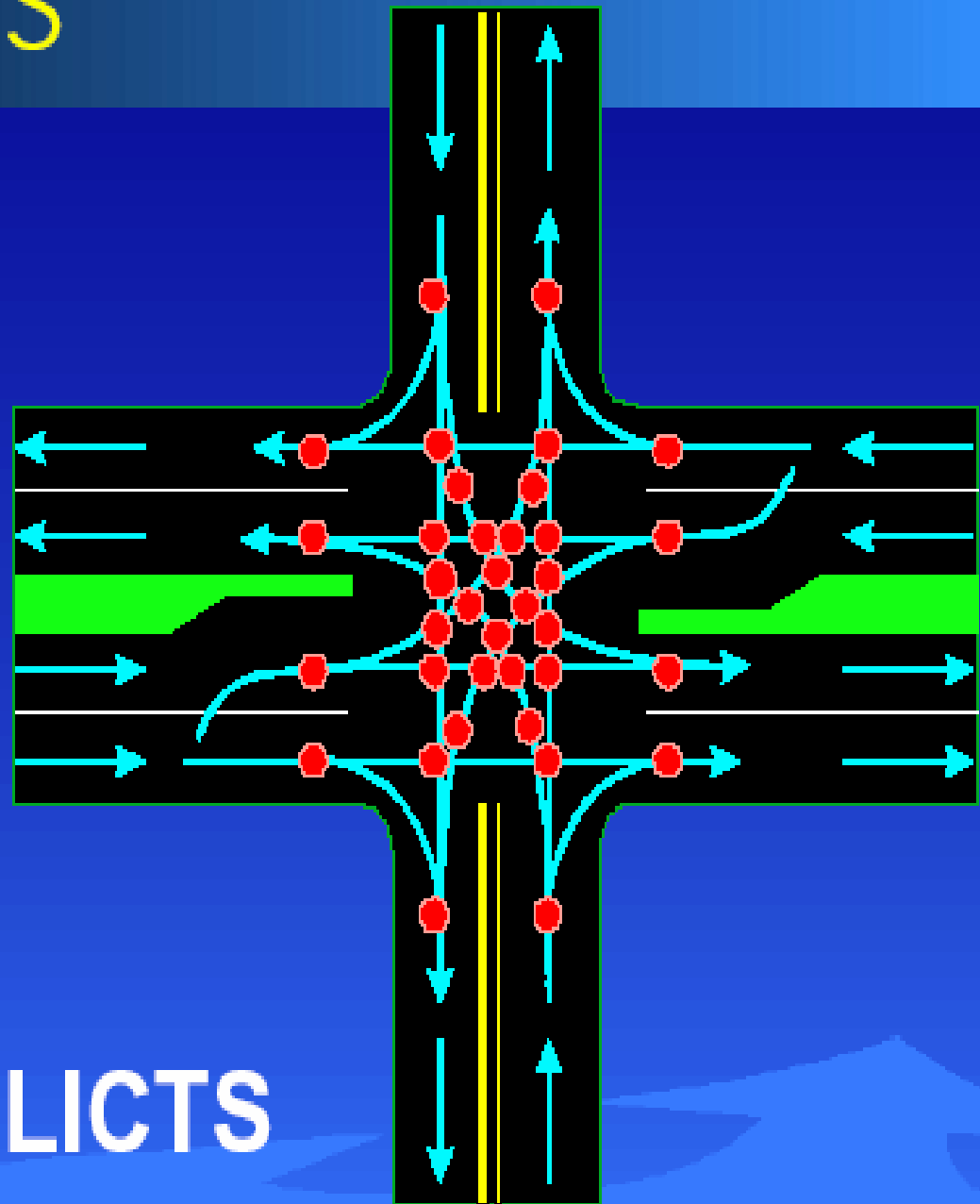
# Conflicts

5 lane section



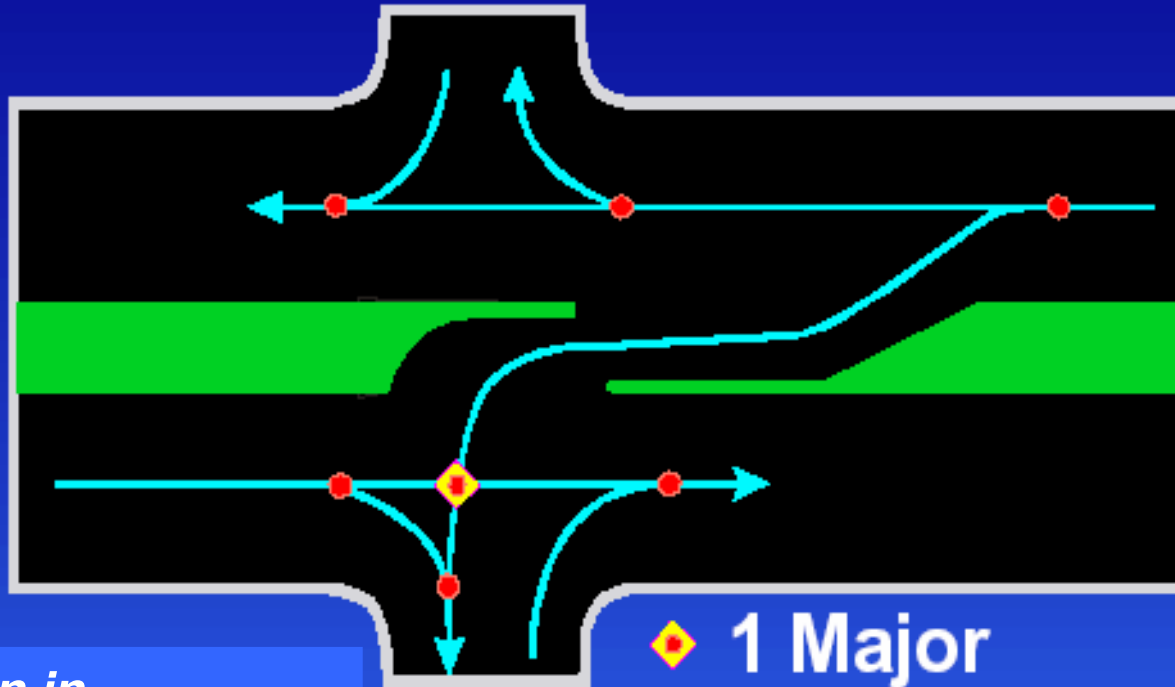


# CONFLICTS



**36** CONFLICTS

# Conflicts



*Right-turn in  
Right-turn out  
Left-Turn in (1 direction)*

1 Major  
6 Minor  

---

7 CONFLICTS

# What are the Principles of Access Management?

- Limit the number of conflict points
- Separate the conflict points
- Remove turning vehicles and queues from through movements



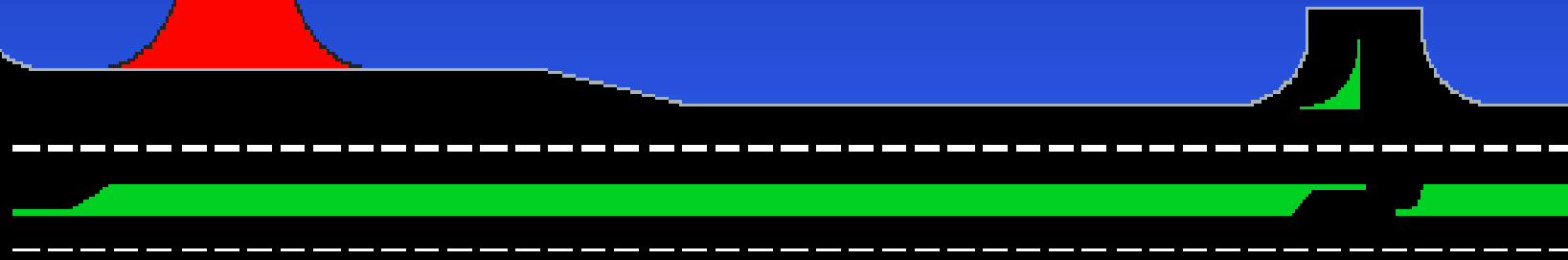
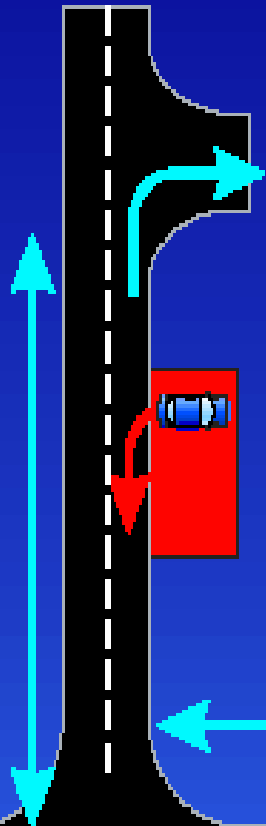
# Techniques to Separate Conflict Points

- Driveway separation
- Corner clearance
- Median opening spacing
- Signal spacing

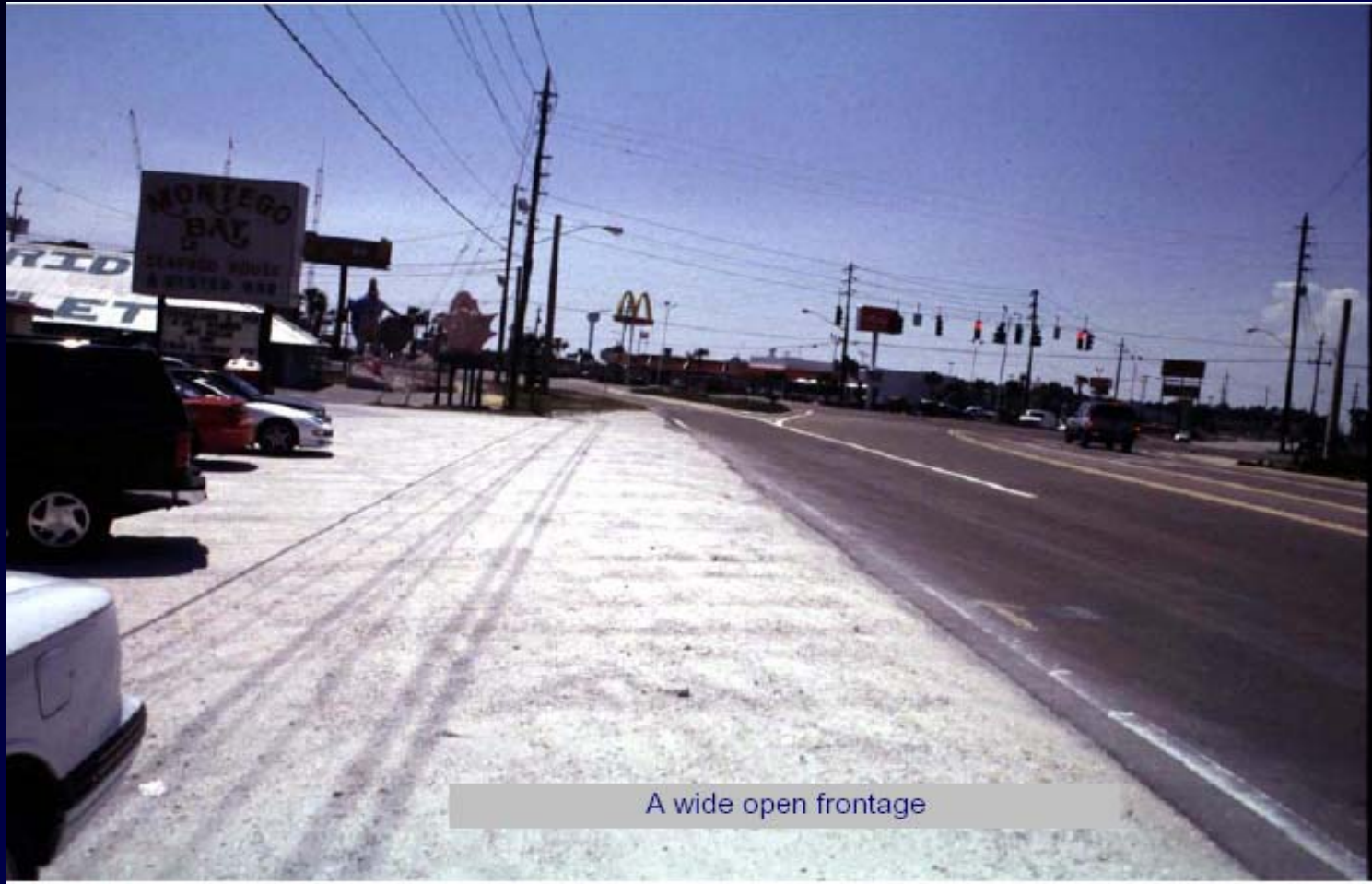


# Driveway Location Principles

- ◆ Away from intersections
- ◆ Access directed to side streets
- ◆ No backout
- ◆ Avoid driveways along right turn lanes
- ◆ Use connection spacing standards
- ◆ No “Open Frontages”



# A Wide Open Frontage



A wide open frontage

# What are the Principles of Access Management?

- Limit the number of conflict points
- Separate the conflict points
- Remove turning vehicles and queues from through movements



# Techniques available to remove turns and queues from the through-lanes

- Turn lanes / tapers
- Internal site design
- Turn radii / driveway flare
- Driveway width

# Techniques available to remove turns and queues from the through-lanes

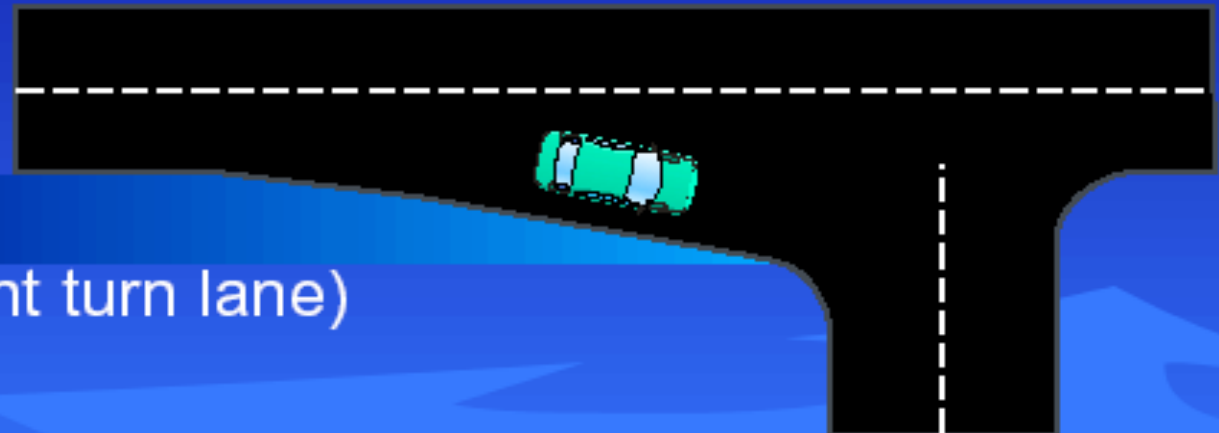
- Turn lanes / tapers
- Internal site design
- Turn radii / driveway flare
- Driveway width

# Turn Lanes

**FULL RIGHT  
TURN LANE**



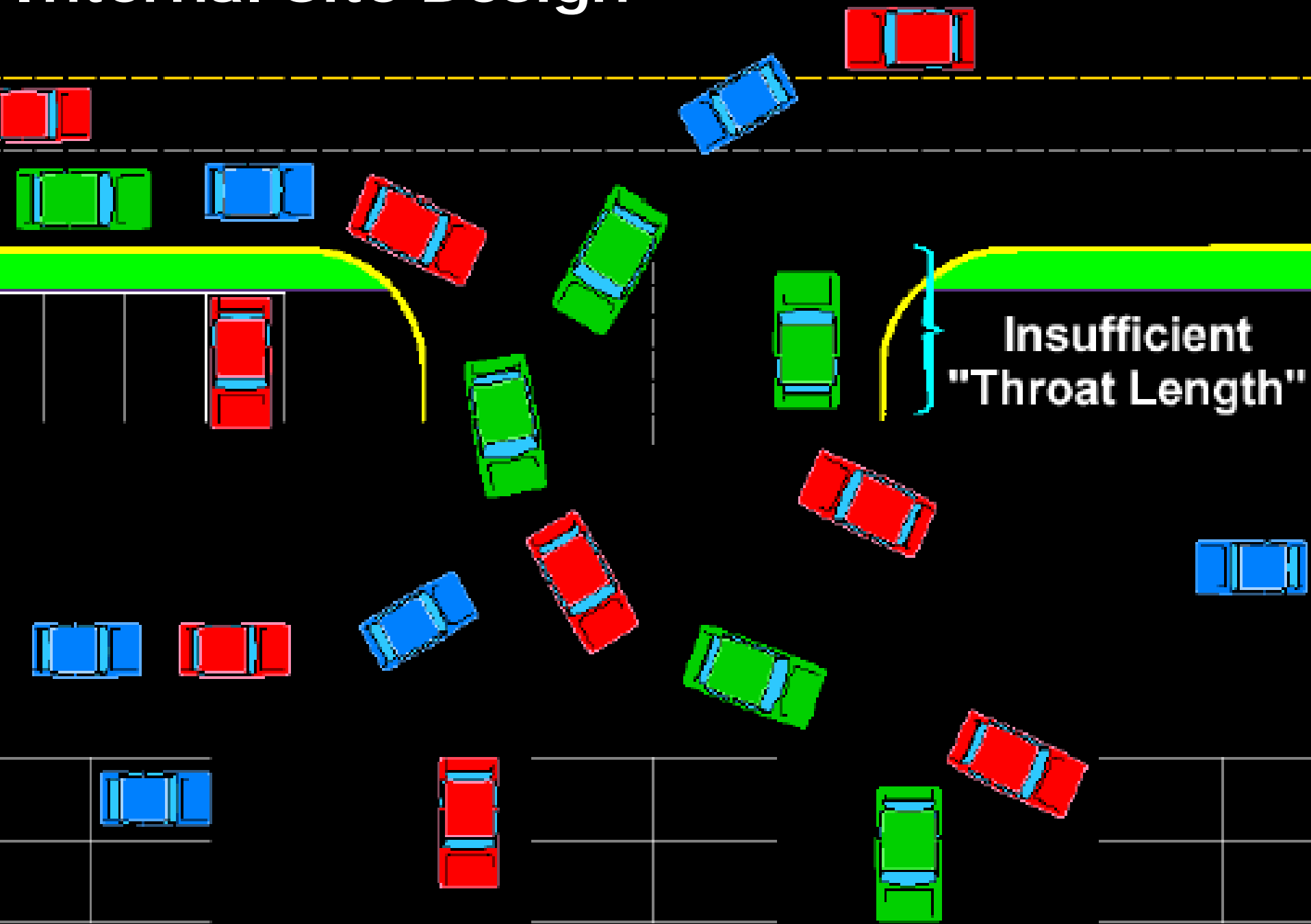
**TAPER**  
(Not a full right turn lane)



# Techniques available to remove turns and queues from the through-lanes

- Turn lanes / tapers
- Internal site design
- Turn radii / driveway flare
- Driveway width

# Internal Site Design

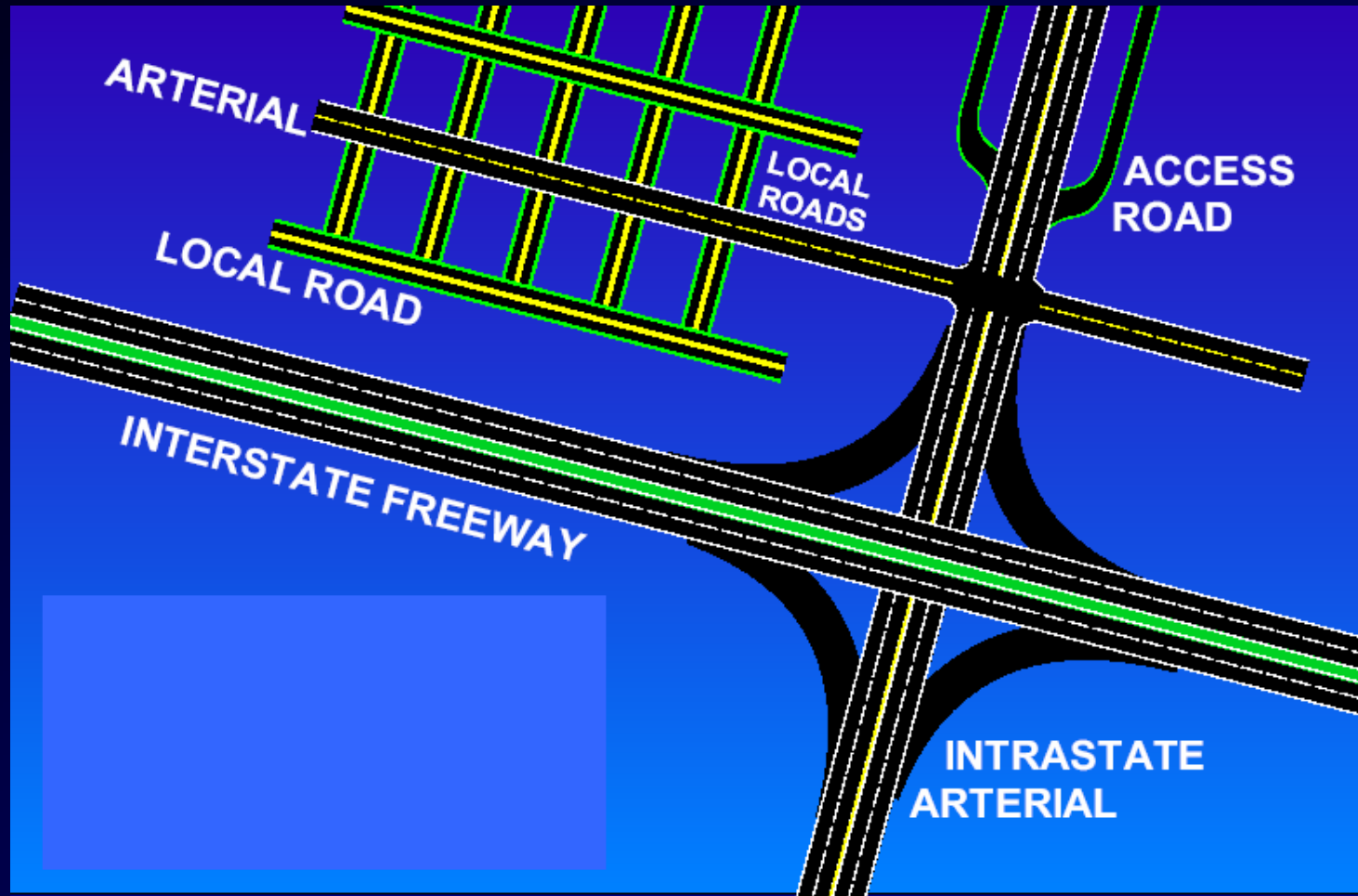


# Internal Site Design

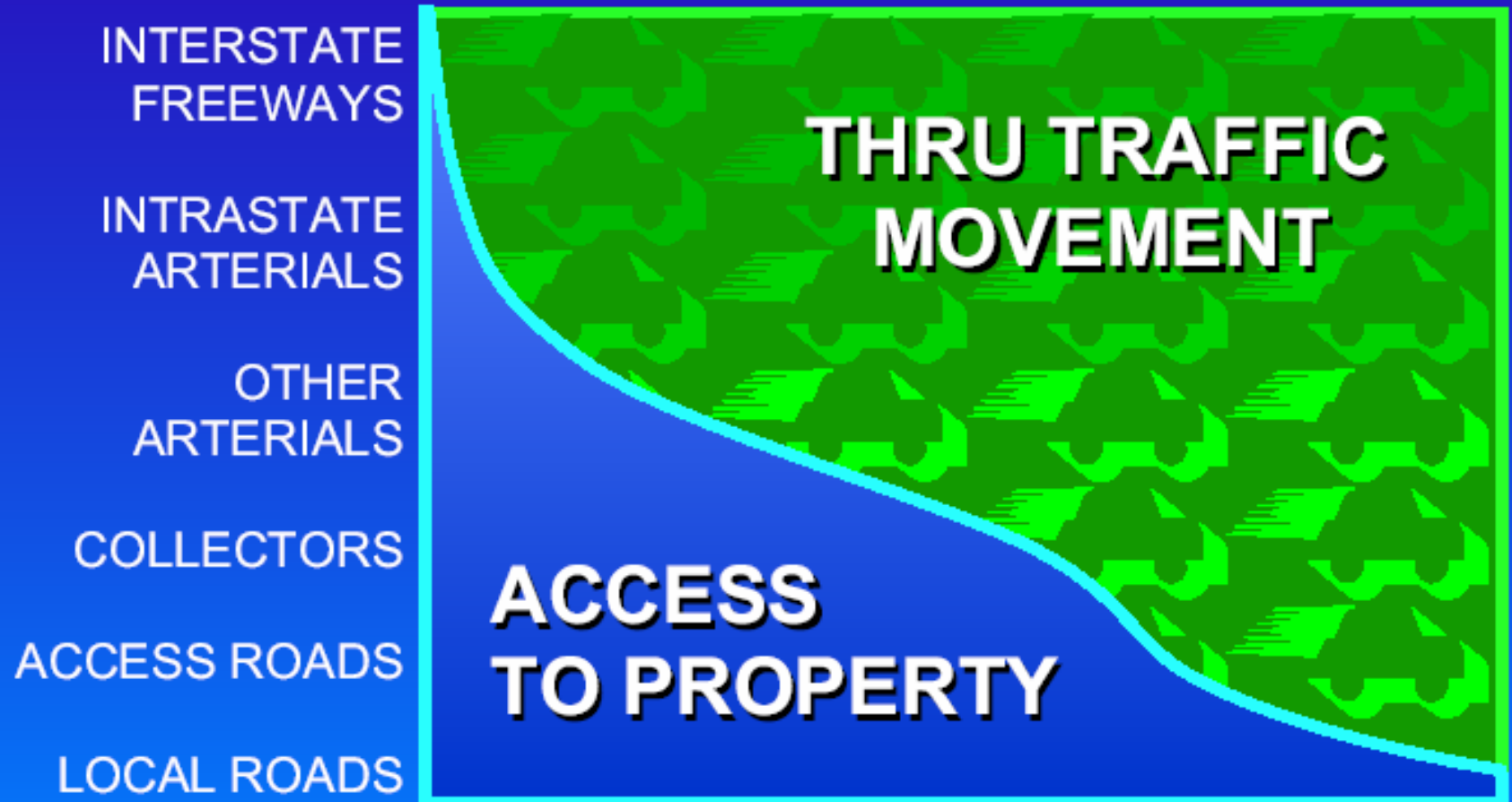
# Techniques available to remove turns and queues from the through-lanes

- Turn lanes / tapers
- Internal site design
- Turn radii / driveway flare
- Driveway width

# Importance of Functional/Access Classification



# Movement / Access Balance

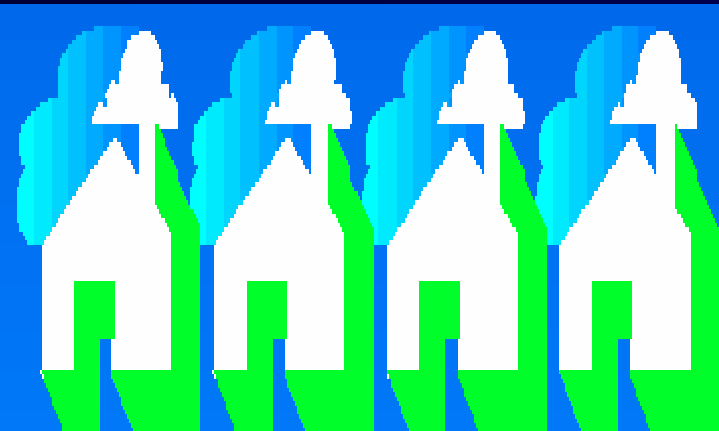


# Movement/Access Balance



# How Can We Institute Access Management?

- Permitting
- Road improvements
- Cooperation with local governments



# How Can We Institute Access Management?

## Permitting

- New developments
- Expanded developments



# How Can We Institute Access Management?

## Road Improvements

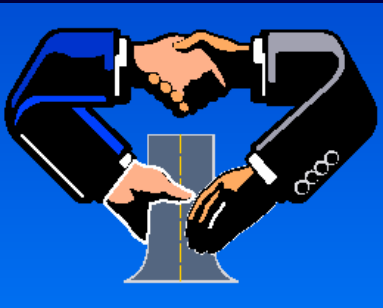
- Widenings
- Intersection upgrades
- Installing new restrictive medians
- New roads



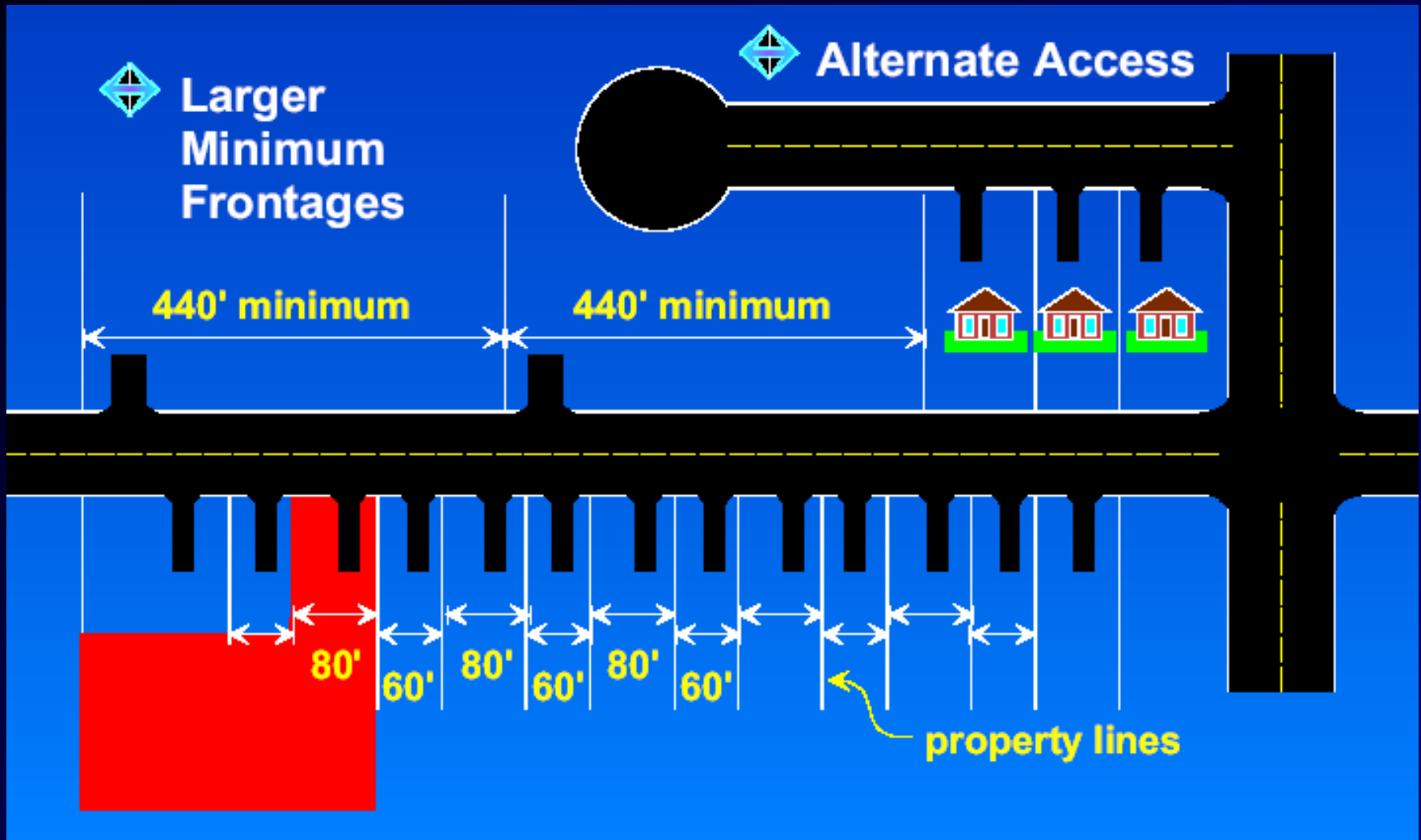
# How Can We Institute Access Management?

## Cooperation with Local Governments

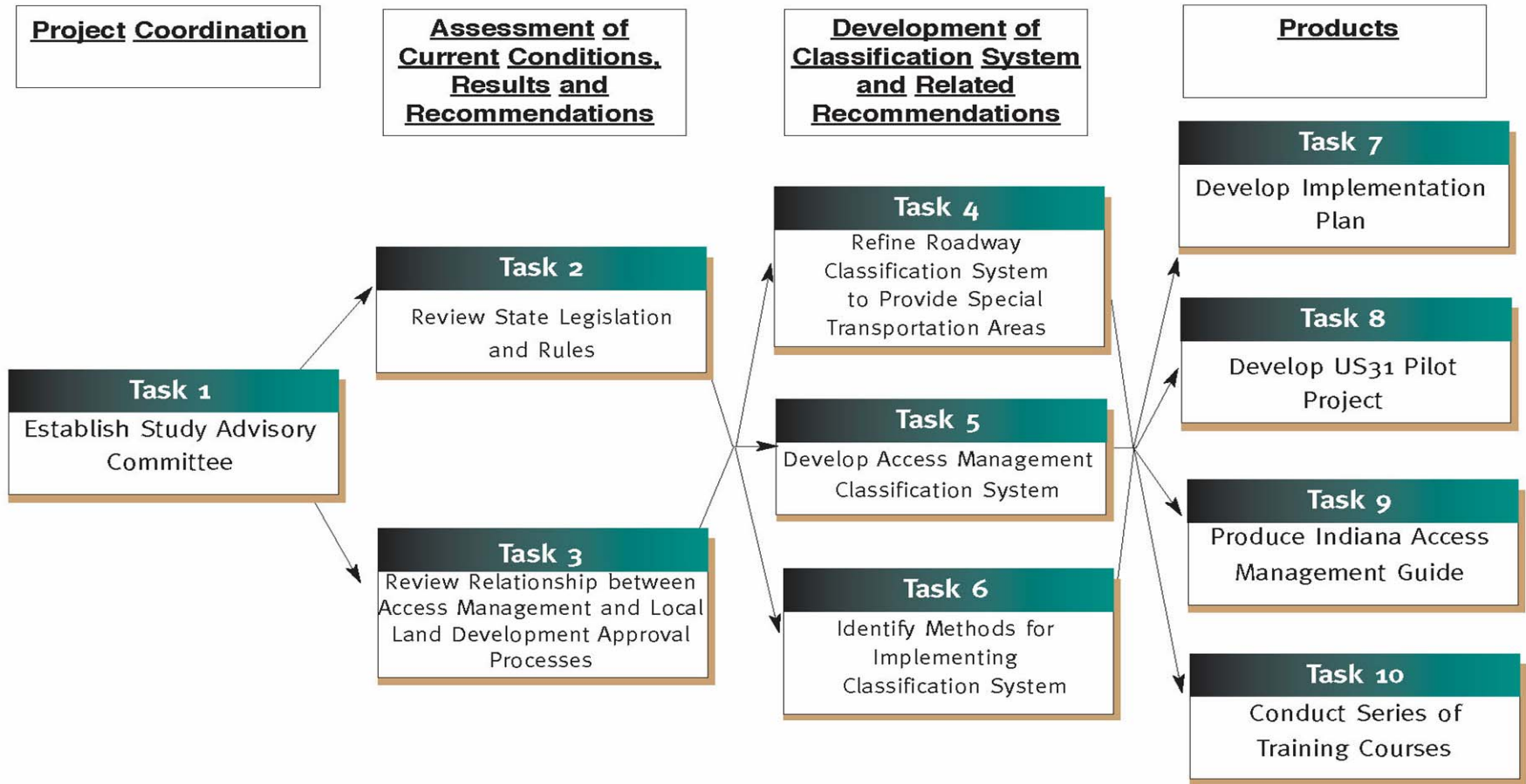
- Site plan review
- Improved subdivision regulations
  - Larger minimum frontage
  - No more “flag” lots
- Joint access/Cross access



# Improved Subdivision Regulations



# Overview of Study Approach



## Study Advisory Committee Meetings





# INDOT Access Management Study

## Tasks 1 to 3

Project Coordination & Assessment of  
Current Conditions



# INDOT Access Management Study

## Work Task No. 1



- Establish a Study Advisory Committee made up of INDOT, MPO, and local land use planning representatives to provide oversight to the study process
- INDOT Representatives:
  - Planning
  - Engineering Assessment
  - Program Development
  - Operations Support
  - District Permits Representatives



# INDOT Access Management Study

## Work Task No. 2



- Review Indiana access management related state legislation and rules
- Compare with national access management practices
- Recommend potential enhancements to improve Indiana procedures



# INDOT Access Management Study

## Work Task No. 3



- Review the relationship of the INDOT access management process with the local land development process (access permits, zoning and subdivision approvals)
- Recommend potential improved procedures

# INDOT Access Management Study

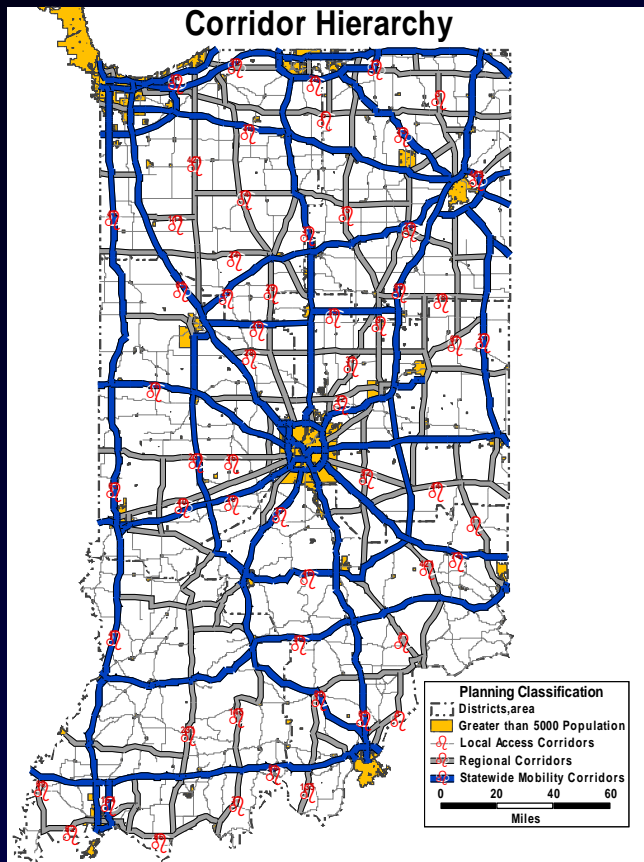
## Tasks 4 to 6

### Classification System



# INDOT Access Management Study

## Work Task No. 4

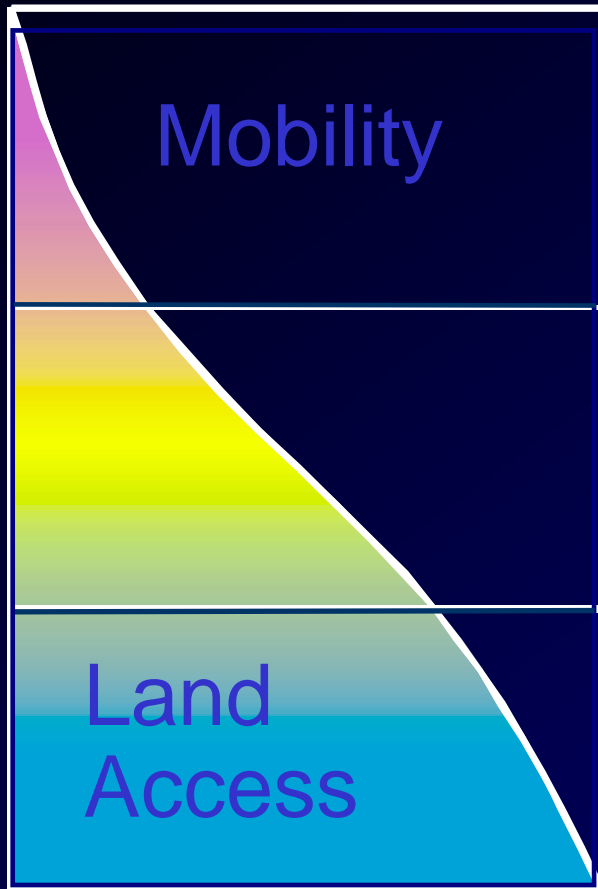


- Develop an access management classification system based on the INDOT Long Range Plan's statewide mobility corridor concept
- Recommend acceptable access, spacing, and design criteria



# INDOT Access Management Study

## Work Task No. 5

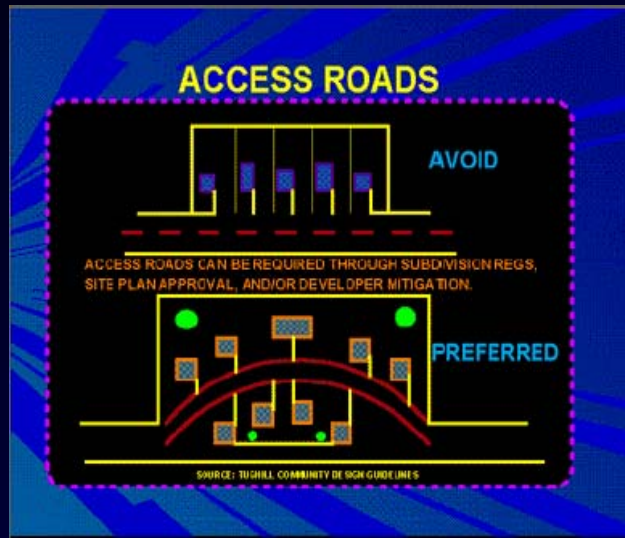


- Refine the roadway classification system of statewide mobility corridors, regional mobility corridors and local access roadways to provide a classification for Special Transportation Areas
- Consider context sensitive solutions and special access management treatments to deal with unique characteristics of an area



# INDOT Access Management Study

## Work Task No. 6



- Identify access management techniques for implementing the classification scheme
- Examples:
  - Access Spacing
  - Signal Spacing
  - Median Treatment

# INDOT Access Management Study

## Tasks 7 to 10

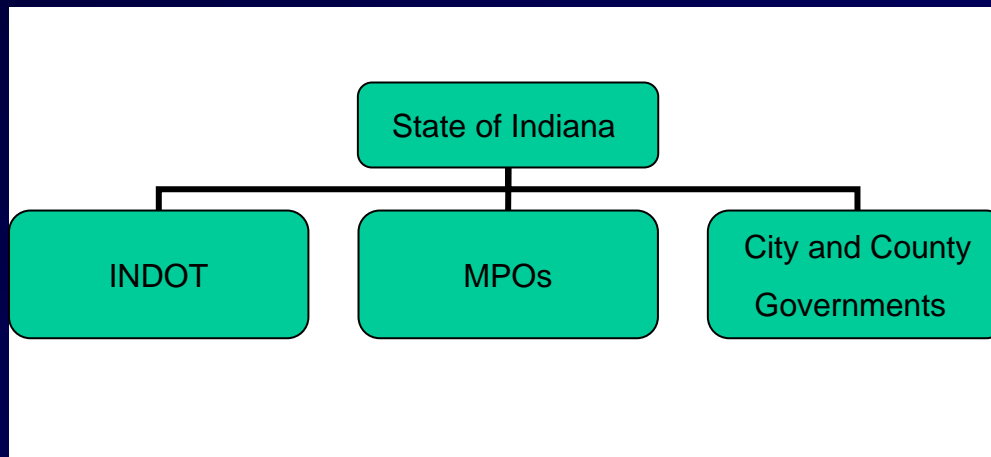
### Products



# INDOT Access Management Study

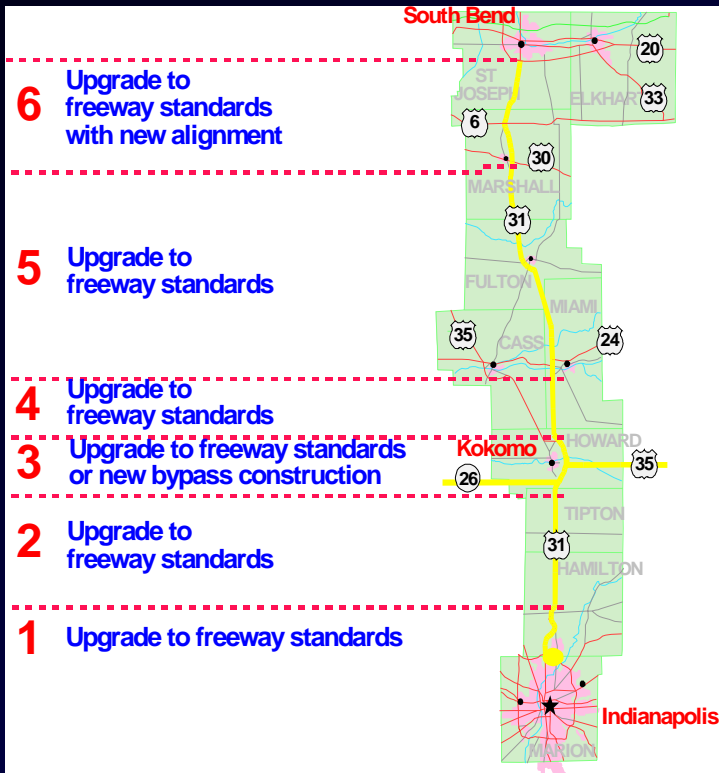
## Work Task No. 7

- Develop an Implementation Plan for strengthening access management in Indiana
  - Steps
  - Authority
  - Organizational Responsibilities
  - Process



# INDOT Access Management Study

## Work Task No. 8

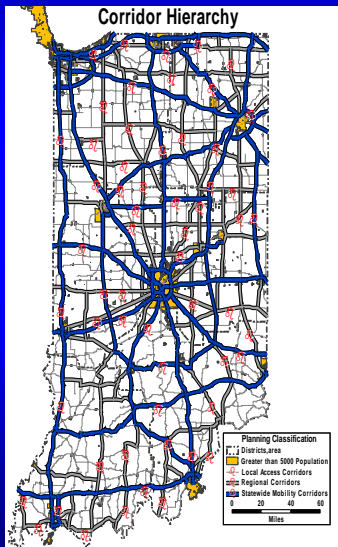


- Develop a pilot project for a US 31 corridor preservation program which will:
  - Focus on access management techniques
  - Provide recommendations for right-of-way reservation and advance acquisition

# INDOT Access Management Study

## Work Task No. 9

### INDOT Access Management Guide



- Produce an Indiana Access Management Guide including content for web pages on the INDOT web site
  - Explaining the INDOT Process used for managing access
  - Identifying access management techniques and benefits
  - Coordinating local land development and access management processes
  - Identifying how access management fits into the Long-Range Transportation Plan



# INDOT Access Management Study

## Work Task No. 10



- Conduct a 1-day access management course at up to three locations to include:
  - Introduction and course objective
  - Overview of access management
  - Issues with current policy and practices
  - Recommended changes
  - Draft implementing mechanisms

# INDOT Statewide Access Management Study

2004 Regional Planning Conference

October 13, 2004

*Presented by*

Jerome Gluck, PE, PTOE

Urbitran Associates, Inc.

